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TRANSMITTAL OF REPLY BRIEF

Docket No. 60680-1843

In re Application of: Kanu G. Shah et al.

Application No.	Filing Date	Examiner	Group Art Unit
10/790,502-Conf. #1038	March 1, 2004	Saira B. Raza	1711

Invention: EPOXY NITRILE INSULATOR AND SEAL FOR FUEL CELL ASSEMBLIES

TO THE COMMISSIONER OF PATENTS:

Transmitted herewith is the Reply Brief in response to the Examiner's Answer mailed May 31, 2006, with respect to the Appeal Brief filed: March 13, 2006 .

The fee for filing this Appeal Brief is No fee is due with this response .

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Dated: July 28, 2006

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Docket No.: 60680-1843
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Kanu G. Shah, et al.

Application No.: 10/790,502 Confirmation No.: 1038

Filed: March 1, 2004 Art Unit: 1711

For: EPOXY NITRILE INSULATOR AND SEAL FOR FUEL CELL ASSEMBLIES Examiner: Saira B. Raiza

REPLY BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Dear Sir:

Pursuant to 37 C.F.R. § 41.41, Applicant submits this Reply Brief in response to the Examiner's Answer, mailed May 31, 2006. Claims 25-38 stand rejected. As the Examiner indicated in her Answer, Applicant's Appeal Brief erroneously indicated that the claims were finally rejected. The rejection is non-final. However, the claims have been twice rejected. The rejected claims are set forth in the Claims Appendix attached hereto.

This is an appeal from the decision, dated October 14, 2005 finally rejecting claims 25-38 as failing to comply with the written description requirement of 35 U.S.C. § 112, ¶ 1 and as being indefinite under 35 U.S.C. § 112, ¶ 2; finally rejecting claims 29-31 and 36-38 as being obvious under 35 U.S.C. § 103 over the combination of Pelligri, et al., U.S. Patent No. 4,197,178 ("Pelligri") and Siebert, U.S. Patent No. 4,025,578 ("Siebert"); finally rejecting claims 25, 27-28, 32 and 34-35 as being obvious under 35 U.S.C. § 103 over the combination of Pelligri and Siebert in view of the *Kirk-Othmer Encyclopedia of Chemical Technology* (Wiley & Sons 1996) ("Kirk-Othmer"); and finally rejecting claims 26 and 33 as obvious under 35 U.S.C. § 103 over the combination of Pelligri, Siebert, Kirk-Othmer, and Canfield, U.S. Patent No. 6,274,262 ("Canfield"). In her Answer, the Examiner withdrew the rejection of claims 36-38 based on indefiniteness under 35 U.S.C. § 112, ¶ 2.

ARGUMENT

I. Claims 25-38 Satisfy the Written Description Requirement of 35 U.S.C. § 112, ¶ 1

Claims 25-38 stand rejected as failing to comply with the written description requirement of 35 U.S.C. § 112, ¶ 1. According to the Examiner, the phrase "generally ambient temperature" is not supported in the specification, rendering the claims non-compliant with the written description requirement. Office Action, dated October 14, 2005 ("10/14/05 Office Action") at 2.

As an initial matter, claims 36-38 *do not* recite the phrase "generally ambient." In acknowledgement of this fact, the Examiner withdrew her indefiniteness rejection of claims 36-38. For the same reason, her written description rejection of claims 36-38 should be withdrawn.

The Examiner does not dispute that Applicant's specification discloses radiation curing temperatures that *include*, but which are not strictly limited to, those that are ambient. Notwithstanding this disclosure, the Examiner seeks to impose two requirements, neither of which is consistent with Federal Circuit precedent. Specifically, she asserts that "generally" must be recited *verbatim* in Applicant's specification and that the specification must provide "support or guidance as to the numerical boundary of 'generally' ambient temperature." Examiner's Answer at 7. However, she cites no authority indicating that either or both of these conditions must be met to satisfy the written description requirement. Nor could she. As pointed out in Applicant's Appeal Brief, the Federal Circuit has held that "it is not necessary that the application describe the claimed invention in *ipsis verbis*." *In re Edwards*, 568 F.2d 1349, 1351-1352 (C.C.P.A. 1978). All that is required is that Applicant "reasonably convey" that it was in possession of the claimed subject matter. *Id.* Applicant's specification does just that. Moreover, in the *Anchor Wall* decision cited by Applicant and by the Examiner, the Federal Circuit rejected the contention that the claims-in-suit were invalid based on their use of the term "generally parallel," notwithstanding its finding that the patent-in-suit did "not specify any special definition for the terms 'generally,' 'parallel,' or 'generally parallel.'" *Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d

1298, 1311 (Fed. Cir. 2003). Thus, no numerical boundaries need be provided in order to properly support the term "generally ambient."

II. Claims 25-32 Are Definite Under 35 U.S.C. § 112, ¶ 2

As with her written description rejection, the Examiner's indefiniteness rejection is based on Applicant's use of the term "generally ambient temperatures." The Examiner's only stated basis for this rejection is her assertion that "the term 'generally' . . . can encompass an unlimited range . . . ." This assertion is incorrect and is inconsistent with Federal Circuit precedent. As indicated in Applicant's Appeal Brief, the Federal Circuit has expressly approved of the word "generally" as a descriptive word used "to avoid a strict numerical boundary to a specified parameter." *Anchor Wall Systems,* 340 F.3d at 1310-1311. *See also North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1346 (Fed. Cir. 2005).

In *Anchor Wall Systems,* the Court held that "'generally parallel' envisions some amount of deviation from exactly parallel." *Anchor Wall Systems*, 340 F.3d at 1311. The Court did not hold that "generally parallel" encompassed an unlimited range of angles deviating from parallel. The Examiner's indefiniteness rejection cannot be reconciled with the Federal Circuit's holding that "terms of approximation such as 'generally' need not be construed with mathematical precision." *North American Container*, 415 F.3d at 1346. Accordingly, it should be reversed.

III. Claims 29-31 and 36-38 are Non-Obvious Over the Combination of Pelligri and Siebert

The Examiner has rejected Claims 29-31 and 36-38 as obvious under 35 U.S.C. § 103 based on the combination of Pelligri and Siebert. According to the Examiner, "The position is taken that it would have been obvious to substitute the epoxy nitrile resin of Siebert for the epoxy resin in the invention of Pelligri." Examiner's Answer at 8. However, the Examiner has not identified a motivation or suggestion in the prior art for making the proposed substitution. Moreover, the differences between the references counsel against the substitution. The Examiner relies on the combination of Pelligri and Siebert for her

obviousness rejections of all pending claims. As a result, each of those rejections is improper and should be reversed.

It is undisputed that Pelligri is directed to a *coated* fuel cell separator plate:

> After cooling, at least the anodic side of the separator, but preferably both sides thereof are provided with a *coating*, about 30 to 500 μm thick, of unloaded chemically resistant thermosetting resin.

Pelligri at 4:2-5 (emphasis added).

It is further undisputed that, in contrast, Siebert is directed to mixtures that are "poured or injected into stationary molds, rotational molds, and the like . . . . " Siebert at 7:39-41. One of Siebert's exemplary compositions is an epoxy nitrile resin. However, Siebert gives no indication that the epoxy nitrile resin is suitable for coating on a substrate, let alone a fuel cell separator plate.

Notwithstanding the foregoing, the Examiner asserts that both Pelligri and Siebert involve "applying resins into molds and curing." In particular, she relies on Pelligri's discussion of applying a resin over a mold in which a graphite separator plate is formed. That is beside the point. Although Pelligri mentions the use of a mold, the referenced mold is used to form a graphite separator plate. However, Pelligri's epoxy resin is still *coated* on the molded separator plate. Because Siebert provides no indication that its epoxy nitrile compositions are suitable for coating applications, one of ordinary skill in the art would necessarily be reluctant--not motivated-- to substitute them for those of Pelligri.

The coating issue aside, nothing about Siebert suggests that its compositions would provide any benefits over those of Pelligri. According to the Examiner, Pelligri discloses that epoxy resins with aromatic amine hardeners are "especially suitable," and therefore, one of ordinary skill in the art would be motivated to replace them with Siebert's compositions, which are also cured using an amine. This analysis misses the point. In evaluating whether there is a motivation to combine the references, the issue is not whether amine hardeners are beneficial, bur rather, whether one of ordinary skill in the art would recognize additional benefits from substituting Siebert's *epoxy nitrile* resin for Pelligri's epoxy resin. Pelligri discloses particular species of epoxy resins with amine hardeners. *See* Pelligri at 10-12.

There is nothing about Siebert's epoxy nitrile/amine compositions that suggests they are any better than the epoxy resin/amine compositions already disclosed by Pelligri. Thus, one of ordinary skill in the art would have no reason to substitute Siebert's compositions for those of Pelligri. Accordingly, it is improper to combine Pelligri with Siebert to reject Applicants' claims.

Additional arguments applicable to the various rejected claims are set forth below.

A. Claim 29

Claim 29 recites "a solid coating comprising an epoxy nitrile resin." As claimed, the coating is "polymerized or cross-linked in response to infrared radiation at generally ambient temperatures."

In addition to the reasons stated above, the rejection of claim 29 is improper because the combination of Siebert and Pelligri fails to disclose a coating that is "polymerized or cross-linked in response to infrared radiation at generally ambient temperatures." It is undisputed that neither Siebert nor Pelligri disclose the use of infrared polymerization or cross-linking. Thus, the references cannot be combined to obtain the claimed invention. Nevertheless, the Examiner contends that the combination of Pelligri and Siebert will yield the fuel cell plate of claim 29.

The Examiner's rejection is predicated on the *assumption* that the thermally cured compositions of Pelligri and Siebert "would have the same structure and properties as those cured by infrared radiation." Examiner's Answer at 7. The Examiner has yet to provide any evidence supporting this assumption. Instead, she asserts that in paragraphs 11 and 20 of the Specification, Applicant admits that thermally cured and infrared cured products are "substantially equivalent". This assertion is incorrect. It is true that the referenced portions of Applicant's specification indicate that the disclosed compositions *may be cured* thermally or via infrared radiation. However, that statement is a far cry from an admission that thermal curing and infrared curing are "substantially equivalent," as the Examiner contends.

Moreover, Applicant's specification identifies structural differences in fuel cell plates that are cured thermally and by the use of infrared radiation. Specifically, Applicant's specification states that the use of infrared curing "is an advantage when using graphite

composite fuel cell plates that can warp at temperatures associated with heat-cured coatings." Specification at ¶ 22. The Examiner mischaracterizes this excerpt from Applicant's disclosure, contending that it merely states that warping problems "may occur." It does not. The excerpt clearly indicates that for certain categories of known graphite separator plate materials, warping problems will occur at the cure temperature required for thermal curing.

Furthermore, Siebert and Pelligri clearly indicate that the problem of warping is more than a remote possibility. Pelligri states that its separator plates exhibit good dimensional stability "up to 150°-180°C." Pelligri at 3:37-41. However, Siebert indicates that its thermally cured coatings may require curing temperatures *as high as* 180°C. Siebert at 6:23-26. As a result, if Siebert and Pelligri are combined in the manner suggested by the Examiner and thermally cured, there is at least a substantial likelihood that the dimensional stability of the resulting separator plate would be impaired by the required curing temperatures. In contrast, Applicant's claimed infrared process allows for lower processing temperatures and does not suffer this drawback.

"In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness." *In re Rijckaert, et al.*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). Moreover, "When the PTO seeks to rely on a chemical theory in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory." *In re Grose*, 592 F.2d 1161, 1167 (C.C.P.A. 1979), citing *In re Mills*, 281 F.2d 218, 223-224 (C.C.P.A. 1960). Given the foregoing, the Examiner has failed to establish that Pelligri and Siebert can be combined to yield the claimed invention, and the rejection should be reversed.

B. Claims 30 and 31

Claims 30 and 31 depend from claim 29, and for the reasons stated above, are allowable over the references of record. However, both claims recite additional patentable features that are ignored in the Examiner's Answer. Specifically, claim 30 recites that the solid coating is "less than about 250μ thick," while claim 31 recites that the coating is "less than about 150μ thick." Initially, the Examiner asserted that the choice of thickness was obvious as a means to balance cost and insulation properties. As Applicant indicated in its Appeal Brief, the Examiner provided no evidence indicating that the *prior art* recognized the

use of coating thickness as a means to balance these properties. The Examiner does not dispute this point in her Answer. Accordingly, the rejection should be reversed.

C. Claim 36

Claim 36 recites a fuel cell plate comprising a coating "polymerized or cross-linked in response to infrared radiation." Therefore, claim 36 is allowable over the references of record for the same reasons provided in Section III.A. with respect to claim 29. Unlike claim 29, however, claim 36 recites a coating *consisting essentially of* epoxy nitrile resin.

The Examiner contends that the transition phrase "consisting essentially of," does not further distinguish the references of record because it purportedly does not exclude Siebert's amine curing compounds. *See* Siebert at 8:36-39 ("the mix cured using an amine"). The Examiner recognizes that the phrase "consisting essentially of" excludes unrecited ingredients that affect the basic and novel properties of the invention. However, she contends that Siebert's amines *will not* affect the basic and novel properties of the invention. The Examiner provides no evidence in support of this contention. As she indicates, Applicant's specification states that polyamine curing agents may be used with the claimed epoxy nitrile compounds. However, nowhere does Applicant concede that such curing agents will not affect the basic properties of the resulting composition. Therefore, the Examiner's assertions concerning the scope of claim 36 as compared to Siebert and Pelligri are based solely on a mischaracterization of Applicant's specification. Such a mischaracterization is not sufficient to establish a prima facie case of obviousness.

D. Claims 37-38

Claims 37 and 38 depend from claim 36 and respectively recite that the coating is less than about 250 μ thick and less than about 150 μ thick. As discussed above, neither Pelligri nor Siebert suggest the use of these thicknesses in an infrared polymerized or cured coating. As indicated in Applicant's Appeal Brief, the Examiner has not provided any evidence establishing that the choice of thickness is obvious based on an optimization of insulation and cost. Accordingly, the Examiner has failed to establish a prima facie basis for rejecting the claims as obvious.

IV. Claims 25, 27-28, 32, and 34-35 Not Obvious Over Pelligri In View of Siebert In Further View of Kirk-Othmer

Claims 25, 27-28, 32, and 34-35 are directed to an infrared process for sealing and insulating a fuel cell plate. Recognizing that neither Siebert nor Pelligri disclose or suggest infrared polymerization or curing, the Examiner has combined Kirk-Othmer with Siebert and Pelligri to reject the claims. For the reasons provided above in Section III, there is no motivation or suggestion in the prior art for combining Siebert and Pellligri. For this reason alone, the rejection of claims 25, 27-28, 32, and 34-35 is improper. However, there is also no motivation for combining Kirk-Othmer with Siebert and Pellligri. For this additional reason, the rejection of claims 25, 27-28, 32, and 34-35 is improper.

According to the Examiner, it would have been obvious to replace Pelligri's epoxy resin with Siebert's epoxy nitrile resin and to cure Siebert's epoxy nitrile resin with infrared radiation (instead of the thermal process disclosed by Siebert). In order to establish that one of ordinary skill in the art would be motivated to make the proposed modification, the Examiner must show--at a minimum--that one of ordinary skill would expect some benefit or advantage in *replacing thermal polymerization or curing with infrared polymerization or curing*. She has not made this showing.

According to the Examiner, Kirk-Othmer suggests the desirability of replacing the thermal curing processes of Pelligri and Siebert with infrared radiation because "shortwave radiation can be focused for improved efficiency." Examiner's Answer at 10. However, the referenced excerpt from Kirk-Othmer does not compare infrared processes to thermal processes. Instead, it compares the benefits of *shortwave* infrared radiation to *medium or long wavelength* infrared radiation. Kirk-Othmer at 854. According to the Examiner, Kirk-Othmer also states that "thermally cured polymer systems, including epoxy/polyfunctional amine systems, can be cured or processed efficiently using infrared radiation." Examiner's Answer at 10. However, Kirk-Othmer actually says that "Many conventional coatings systems . . . which cure through thermal processes . . . ***can also*** be cured or processed efficiently using ir radiation." Kirk-Othmer at 854 (emphasis added). This excerpt does not state that infrared curing provides improved efficiency as *compared to thermal curing*. Nor does it otherwise suggest that infrared curing should be used in place of thermal curing. None of the references of record compare infrared curing to thermal curing or indicate that an infrared process is

sufficiently better to warrant its substitution for a thermal process. Applicant's specification recognizes that the use of infrared processes allows for lower curing temperatures and reduced separator plate warping. However, the prior art does not. "The mere fact that the prior art could be modified in the manner proposed by the Examiner would not have made the modification obvious unless the prior art suggested the desirability of the modification." *Ex parte Dussaud*, 7 USPQ2d 1818, 1820 (Bd. App. & Int'f 1988)); *see also In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989). As a result, there is no motivation for combining Kirk-Othmer with Siebert and Pellligri, and the rejection of claims 25, 27-28, 32, and 34-35 is improper.

A. Claim 25

Claim 25 recites applying an epoxy nitrile resin to a surface of a fuel cell plate at generally ambient temperatures and exposing the resin to infrared radiation to initiate polymerization or crosslinking. For the reasons presented in Section III, there is no motivation for combining Siebert and Pelligri. As also indicated above, there is no motivation for combining Kirk-Othmer with Siebert and Pelligri. Accordingly, the Examiner has not provided a prima facie basis for her obviousness rejection.

B. Claims 27 and 28

Claims 27 and 28 depend from claim 25 and respectively recite infrared exposure times of "less than about forty five minutes" and "less than about 30 minutes." The Examiner has yet to even articulate a *basis* for rejecting claims 27 and 28. As indicated in Applicant's Appeal Brief, none of the references of record disclose suitable infrared radiation exposure times. Nor do they acknowledge that the exposure time has any significance for the process or the resulting product properties. These points are undisputed. Thus, the additional limitations of claims 27 and 28 further distinguish the references of record.

C. Claim 32

Claim 32 recites applying a coating precursor consisting essentially of epoxy nitrile resin at generally ambient temperatures on a surface of a fuel cell plate and exposing the coating precursor to infrared radiation to initiate polymerization or crosslinking. As

mentioned above, the combination of Siebert and Pelligri is improper, as is the combination of Siebert and Pelligri with Kirk-Othmer. For these reasons alone, claim 32 is not obvious over the references of record. In addition, claim 32's recitation of a coating precursor *consisting essentially of* epoxy nitrile resin distinguishes it from the references of record. The Examiner disagrees, but cites no evidence in support of her position. Instead, as with claim 36, she relies on a mischaracterization of Applicant's disclosure to support her rejection. Specifically, she incorrectly equates Applicant's statement that polyamine curing agents can be used with the disclosed epoxy nitrile coatings as an admission that such curing agents do not affect the basic properties of such coatings. Given the mischaracterization of Applicant's disclosure, the Examiner has not met her burden of establishing that Siebert's amine curing agents would be encompassed by a composition consisting essentially of epoxy nitirile resin.

IV. Claims 26 and 33 Are Non-Obvious Over Pelligri In View of Siebert, In Further View of Kirk-Othmer In Further View of Canfield

Claims 26 and 33 depend from claims 25 and 32, respectively, and further recite the use of screen printing to apply the epoxy nitrile resin. As explained above, there is no motivation for combining Pelligri, Siebert and Kirk-Othmer. Canfield mentions screen printing a gasket on a fuel cell plate. Canfield at 4:48-50. Previously, the Examiner contended that it would have been obvious to combine Canfield with Pelligri, Siebert, and Kirk-Othmer "to provide a patterned discontinuous gasket layer having equally improved insulative properties." 10/14/05 Office Action at 5. Now, however, she contends that the motivation comes from Canfield's use of a screen printed gasket to "define the 'up side' of the [separator] plate." Examiner's Answer at 11.

The Examiner does not dispute that neither Pelligri nor Siebert mention screen printing. Nor does Canfield discuss suitable materials for use with a screen printing process. In addition, while Canfield may discuss the benefits of using a flow gasket to identify the "up side" of a separator plate, *none* of those benefits are tied to the use of *screen printing.* At most, Canfield suggests the desirability of selectively placing a gasket on a separator plate. It does not suggest why one of ordinary skill in the art would replace Pelligri's coating process with screen printing to make that selective gasket placement. Further, in addition to suggesting the possible use of screen printing, Canfield states that other techniques can be

used to apply the gasket:

> Alternatively, in another technique 310 (see FIG. 7), the bipolar plate 90 is manufactured (block 312) and a paraphorm seal may be formed (block 314) by a robot that applies a thin paraphonn [sic] bead, for example, on the appropriate surface of the bi-cooler plate. **Other techniques to form the gasket 190 directly on the surface of the bi-cooler plate 90 may be used.**

Canfield at 4:52-58 (emphasis added).

Applicant's specification recognizes the "low cost, speed and accuracy" of screen printing. Specification at 21:1-10. Canfield merely presents screen printing as one of several options for applying a gasket to a separator plate. The Examiner's contention that one of ordinary skill in the art would select Canfield's screen printing process over the other disclosed options cannot properly be attributed to anything other than the improper use of hindsight gained from Applicant's disclosure. Accordingly, the Examiner has failed to provide a motivation for combining Canfield with Pelligri, Siebert, and Kirk-Othmer in the manner necessary to obtain the claimed invention. For this reason, the recitation of screen printing further distinguishes claims 26 and 33 over the references of record.

CONCLUSION

In view of the foregoing, reversal of the Examiner's rejections is respectfully requested. Appellant believes that no fee is due with this Reply Brief. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 60680-1843 from which the undersigned is authorized to draw.

Dated: July 28, 2006

Respectfully submitted,

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CLAIMS APPENDIX

Claims Involved in the Appeal of Application Serial No. 10/790,502

25. (Previously Presented) A process for sealing and insulating a fuel cell plate, the process comprising:

providing a gas impermeable fuel cell plate having first and second surfaces;

applying an epoxy nitrile resin at generally ambient temperatures on at least the first surface of the fuel cell plate, the coating precursor adapted to polymerize or to cross-link in response to infrared radiation; and

exposing epoxy nitrile resin on the fuel cell plate to infrared radiation to initiate polymerization or cross-linking.

26. (Previously Presented) The process of claim 25, wherein the epoxy nitrile resin is applied by screen printing.

27. (Previously Presented) The process of claim 25, wherein the epoxy nitrile resin is exposed to infrared radiation for about less than about forty five minutes.

28. (Previously Presented) The process of claim 25, wherein the epoxy nitrile resin is exposed to infrared radiation for about less than about thirty minutes.

29. (Previously Presented) An insulated fuel cell plate comprising:

a gas impermeable plate having first and second surfaces; and

a solid coating polymerized or cross-linked in response to infrared radiation at generally ambient temperatures and adhering to at least one of the first and second surfaces of the plate, the solid coating comprising an epoxy nitrile resin.

30. (Original) The insulted fuel cell plate of claim 29, wherein the solid coating is less than about 250 μ thick.

31. (Original) The insulated fuel cell plate of claim 29, wherein the solid coating is less

than about 150 μ thick.

32. (Previously Presented) A process for sealing and insulating a fuel cell plate, the process comprising:

providing a gas impermeable fuel cell plate having first and second surfaces;

applying a coating consisting essentially of epoxy nitrile resin at generally ambient temperatures on at least the first surface of the fuel cell plate, the coating precursor adapted to polymerize or to cross-link in response to infrared radiation; and

exposing the coating precursor on the fuel cell plate to infrared radiation to initiate polymerization or cross-linking.

33. (Previously Presented) The process of claim 32, wherein the epoxy nitrile resin is applied by screen printing.

34. (Previously Presented) The process of claim 32, wherein the epoxy nitrile resin is exposed to infrared radiation for about less than about forty five minutes.

35. (Previously Presented) The process of claim 32, wherein the epoxy nitrile resin is exposed to infrared radiation for about less than about thirty minutes.

36. (Previously Presented) An insulated fuel cell plate comprising:

a gas impermeable plate having first and second surfaces; and

a coating polymerized or cross-linked in response to infrared radiation and adhering to at least one of the first and second surfaces of the plate, the coating consisting essentially of an epoxy nitrile resin.

37. (Previously Presented) The insulted fuel cell plate of claim 36, wherein the coating is less than about 250 μ thick.

38. (Previously Presented) The insulated fuel cell plate of claim 36, wherein the coating is less than about 150 μ thick.

Application No. (if known): 10/790,502 Attorney Docket No.: 60680-1843

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